

The first locally acquired novel case of 2019-nCoV infection in a healthcare worker in the Paris area

Elise Klement¹, Nagisa Godefroy¹, Sonia Burrel², Dimitri Kornblum¹, Gentiane Monsel¹, Alexandre Bleibtreu¹, Anne-Geneviève Marcelin², Vincent Calvez², Eric Caumes^{1,3}, David Boutolleau², Valérie Pourcher^{1,3}

¹Assistance Publique – Hôpitaux de Paris, Hôpitaux Universitaires Pitié-Salpêtrière Charles Foix, Service de Maladies infectieuses et Tropicales, Paris, France.

²Sorbonne Université, INSERM, Institut Pierre Louis d’Epidémiologie et de Santé Publique, AP-HP, Hôpitaux Universitaires Pitié-Salpêtrière - Charles Foix, laboratoire de virologie, Paris, France

³Sorbonne Université, INSERM, Institut Pierre Louis d’Epidémiologie et de Santé Publique, Paris, France

#Correspondance: Professor Valérie Pourcher Assistance Publique – Hôpitaux de Paris, Hôpitaux Universitaires Pitié-Salpêtrière Charles Foix, Service de Maladies infectieuses et Tropicales, 75013, Paris, France Tel : + 33 1 42 16 01 62 Mail : valerie.martinez@aphp.fr

Dear Editor:

An outbreak of 2019-nCoV has spread from Wuhan, China (1)(2). On January 3rd 2020, six patients have been confirmed in France. We report the first 2019-nCoV locally acquired case in a healthcare-worker (HCW).

The patient, a 53-year-old man works as general practitioner, visiting up to 30-40 patients per day in the Paris area.

On January 23rd, he provided care to Chinese tourists with influenza-like illness. The patients, from Wuhan, were visiting Paris with a tour group traveling through Europe (Italy, Switzerland and France) since January 15th. The two patients had no fever, little cough and normal lung auscultation. The Taiwanese tour guide provided translation for the two patients, and appeared asymptomatic. They left France on January 25th with the group.

On January 27th, the Regional Health Agency informed the physician, who was asymptomatic and working without any respiratory precaution, that the tour guide had been tested positive for 2019-nCoV in Taiwan. On January 28th, the physician presented a sore throat and 38°C fever but no respiratory sign. He self-medicated with amoxicillin and oseltamivir. On the 29th, the patient was transferred to isolation room in the dedicated unit of our department with a slight headache and myalgia. The physical examination was normal. The blood standard tests revealed only a white-cell count at 3,5G/l. Nasopharyngeal swab and induced sputum were collected. FilmArray[®] Respiratory Panel 2 plus (BIOMERIEUX) detected no respiratory pathogens. The viral RNA from 2019-nCoV was detected in both respiratory samples by the use of two RT-PCRs, a first-line screening assay targeting E gene and a confirmatory assay targeting RdRp gene (3). Additional specimens were collected and tested during the following days show other viral carriage sites (Table 1). Only paracetamol was prescribed. The 2019-nCoV RT-PCR signal in nasopharyngeal swab remained positive at the same level since diagnosis but no clinical deterioration 12 days after the contact.

Occurrence of further contamination and management among other tour group members are unknown. French Public Health Services focused on contact tracing to avoid secondary cases among patients visited by the physician. Fortunately to date, none of tested contacts were found positive for 2019-nCoV.

This case report confirms the risk of transmission of 2019-nCoV to HCW in France, as already evidenced in Wuhan where 3,6% of the first 417 cases were HCW (4). We strongly recommend that all HCW use contact and respiratory precautions when visiting patients with respiratory symptoms or/and flu-like illness in all areas with presumed ongoing community transmission of 2019-nCoV.

Acknowledgements: We thank the patient, the nurse and the clinical staff of the Infectious Diseases and Virology Departments of Pitié-Salpêtrière hospital who provided care for the patient.

Potential conflicts: Dr. Marcelin reports grants and personal fees from VIIV Healthcare, grants and personal fees from Gilead, grants and personal fees from MSD, grants and personal fees from Janssen, outside the submitted work; Dr. Calvez reports grants and personal fees from VIIV Healthcare, grants and personal fees from Gilead, grants and personal fees from MSD, grants and personal fees from Janssen, outside the submitted work; All other authors declare no conflicts of interest.

References

1. World Health Organization. Novel coronavirus — China. 2020 ([https://www.who.int/csr/don/02-february-2020-novel-coronavirus-china/en/.](https://www.who.int/csr/don/02-february-2020-novel-coronavirus-china/en/))
2. Johns Hopkins University CSSE. Wuhan coronavirus (2019-nCoV) global cases (https://gisanddata.maps.arcgis.com/apps/opsdashboard/index.html?fbclid=IwAR3R1BbeBNavVblvb3ANpAU5j7IQIWABN_eEduTZc0RNUUGpEicwE9a9YE#/bda7594740fd40299423467b48e9ecf6)
3. Corman VM, Landt O, Kaiser M, Molenkamp R, Meijer A, Chu DK, et al. Detection of 2019 novel coronavirus (2019-nCoV) by real-time RT-PCR. *Euro Surveill.* 2020;25.
4. Li Q, Guan X, Wu P, Wang X, Zhou L, Tong Y, et al. Early Transmission Dynamics in Wuhan, China, of Novel Coronavirus-Infected Pneumonia. *N Engl J Med.* 2020.

Table 1 : Results of the 2019-nCoV real-time RT-PCR from January 29th to February the 4rd 2020 in different clinical specimens from the first healthcare worker infected in France

Specimen	Jan 29th	Jan 31st	Feb 1st	Feb 2nd	Feb 3rd	Feb 4th
Nasopharyngeal swab	Positive Ct, 23.5	Positive Ct, 27.2	Positive Ct, 25.3	Positive Ct, 23.1	Positive Ct, 22.3	Positive Ct, 28.9
Oropharyngeal swab	NT	NT	NT	Positive Ct, 37.6	NT	NT
Induced sputum	Positive Ct, 21.4	NT	NT	NT	NT	NT
Saliva	NT	Positive Ct, 27.3	NT	NT	NT	NT
Conjunctival swab	NT	Positive Ct, 36.7	Negative	Negative	Negative	Negative
Plasma	NT	Positive Ct, 29.0	NT	Negative	NT	Negative
Serum	NT	Negative	NT	Negative	NT	Negative
Urine	NT	Negative	Negative	Negative	NT	Negative
Rectal swab	NT	Negative	Negative	Negative	NT	Negative

Crossing threshold (Ct) values were obtained with the real-time RT-PCR targeting E gene, as previously described (3).

NT: not tested